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Local Favoritism in At-large Proportional Representation Systems*

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Abstract

Pork barrel spending is typically attributed to the strategic behavior of political elites hoping to be electorally rewarded by voters residing in their districts. Such behavior is expected to depend on the incentives imposed by the electoral system. We estimate the causal effect of local representation in a closed-list proportional representation system where individual candidates have no clear electoral incentive to favor their hometown. Using data from Norwegian regional governments, we still find a hometown bias. We document that municipalities with a representative on the regional council from the same party as the county governor tend to obtain more funding for local investments. Citizens also tend to vote more often for parties whose gubernatorial candidate is from their own hometown, consistent with expectations of particularistic benefits. A possible explanation is that regional council members are often recruited from local politics and remain loyal to their roots. We find no evidence that regional council experience affects politicians' future career prospects at the local level.

Keywords: Distributive Politics, Voting Behavior, Regression Discontinuity Design.

JEL Classification: D72, H72, H77

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1 Introduction

Does geographic representation affect policy outcomes in proportional representation (PR) systems? Theories of legislative decision making suggest that elected representatives trade off the virtues of public goods against the attractiveness of spending the money on particularistic goods (‘pork’) benefitting voters in their home districts (Weingast, Shepsle and Johnsen, 1981; Baron and Ferejohn, 1989; Volden and Wiseman, 2007; Fréchet, Kagel and Morelli, 2012). This reasoning fits well with existing evidence from countries using plurality rule, notably the United States.¹ While some scholars argue that geography matters for representation in PR (e.g., Latner and McGann, 2005, Nemoto and Shugart, 2013), the impact on public policy is unclear in this electoral setting.

In this paper we investigate whether politicians are able to obtain public spending benefitting their hometowns within a closed-list PR system. Like Berry, Burden and Howell (2010) and Albouy (2013), we focus on the effect of being represented by a politician aligned with the ruling party.² We use data on the 18 regional governments in Norway covering the period 1976-2011. In this setting, candidates’ electoral incentives to cater to their hometowns are muted, since incumbents’ electoral fortunes are determined by vote counts (and party list nominations) at the regional level, i.e. council members are elected *at large* (Lancaster, 1986; Carey and Shugart, 1995).

To quantify the extent of local favoritism, we use data on regional government funding of local public investments and investigate whether the hometowns of council members from the party of the regional governor receive more investment funding. To overcome potential endogeneity issues related to representation and public policy, we use a simulation-based regression discontinuity (RD) design innovated by Fiva, Folke and Sørensen (2016).³

¹Seminal empirical contributions include Ferejohn (1974) and Mayhew (1974). More recently, Ansolabehere, Gerber and Snyder (2002) show that counties that lost seats due to redistricting received less funding from the state than they did before. Elis, Malhotra and Meredith (2009) find similar effects of reapportionment in the U.S. House. Knight (2008) finds that U.S. states that are over-represented in the Senate receive relatively higher spending from this chamber.

²While we study political alignment *within* the same level of government, a related strand of literature have emphasized political alignment *across* government tiers (e.g., Solé-Ollé and Sorribas-Navarro (2008); Brollo and Nannicini (2012); Fourniaies and Mutlu-Eren (2015)).

³Pettersson-Lidbom (2008) was the first to implement an RD design for PR elections. See Folke

We exploit that in close elections it is *as good as random* which of the political blocs wins the majority of seats, something that in turn strongly determines which party gets the governorship.

We find evidence of a considerable hometown bias. Our results show that investment funding received by a local government increases by about half a standard deviation when they have a representative on the regional council who is politically aligned with the governor. This indicates that local favoritism induces particularistic policies also under an at-large PR system, either because council members share the interests of people from their hometowns or are more sensitive to their demands.

Using data on the hometowns of top candidates in the regional elections, we also investigate whether voters also exhibit a hometown bias. To account for unobserved time-varying changes in party support, we control for voting behavior at the simultaneously-held local government elections. We find that voters are more likely to vote for a party with a top candidate from their hometown, adding to the evidence that local ties are important. It appears that voters use hometown status as a cue to politicians' perceptions of local needs and likely behavior once elected (Shugart, Valdini and Suominen, 2005).

To explore possible mechanisms, we study the careers of individual politicians. Politicians may want to please hometown voters if they intend to pursue a local-level career, for example as mayor, after serving on the regional council (Carozzi and Repetto, 2016). Using a new data set on candidates running for local, regional, and national elections in the 2001-2015 period, we track politicians over time and across political offices. We find no evidence that politicians spend their time in regional office preparing the ground for a local political career. The individual data do, however, show that many regional council members were local politicians *before* running for a seat on the regional council. This background in local politics could help explain why regional council members favor their hometowns. We find that newly-elected regional council members drive the effect on investment funding, indicating that local favoritism decreases with regional ex-

(2014); Freier and Odendahl (2015); Hyytinen et al. (2014); Kotakorpi, Poutvaara and Terviö (2015); Solé-Ollé and Viladecans-Marsal (2013) for subsequent applications and method contributions.

perience. The effect also seems to be stronger for regional council members from small municipalities, where local ties are likely to matter more.

The remainder of the paper is structured as follows. First, we explain the institutional setting of Norwegian regional politics (Section 2) and present the data (Section 3). We then present our main results (Section 4) and explore the mechanisms that lie behind the hometown bias (Section 5). Section 6 concludes.

2 Institutional setting

Norway is a unitary state with three governmental tiers. The two sub-central tiers, i.e., local and regional (*kommuner* and *fylkeskommuner*), are important entities within the Norwegian welfare state.⁴ In 2014, local and regional governments employed about 17 and 2 percent of the labor force and their revenues corresponded to about 17 and 3 percent of mainland GDP, respectively.⁵

In this paper we focus on the regional level of government. Regional governments are responsible for providing upper secondary education, regional roads, local public transportation (since 1981), cultural services like museums and libraries, and dental care (since 1984). Until 2002 they were also responsible for specialist health care, which includes all public hospitals.⁶ Regional governments have no tax discretion. Both regional and local governments receive their revenues through fixed proportions of the national income tax and grants from the central government.

Apart from the capital, Oslo, there are 18 regions in Norway.⁷ The median-sized region has about 216,000 inhabitants, covers about 15,000 square kilometers - approximately the

⁴We use the terms ‘local government’ and ‘regional government’ in reference to the political institutions at these two levels. When we refer to the geographical entities, we use ‘municipality’ and ‘region’, respectively.

⁵The importance of the regional level government has declined over time. In the 1990s, the middle of our sample period, the regional level of government employed about 5 percent of the Norwegian labor force.

⁶Local governments are responsible for delivering services in the field of compulsory schooling, child and elderly care, primary health care, culture and infrastructure.

⁷Oslo has no regional government. The local government is responsible for both local and regional public services.

size of Connecticut - and has 22 municipalities.

Each regional government is run by a council of 35 to 85 members. Decisions are based on simple majority rule. At the beginning of each electoral period, the council elects a governor (*fylkesordfører*) and an executive board (*fylkesutvalg*). The governors are the key players in the elected bodies. They chair the meetings of both the council and the executive board.⁸ The elected governor is almost always the top-ranked candidate from one of the party lists.⁹

Elections for both local and regional governments are held every fourth year in September.¹⁰ In the regional election, each region constitutes a single electoral district and seats are distributed using the Modified Sainte-Laguë method. This method achieves an almost completely proportional allocation of seats (Fiva and Folke, 2016). From 1975 to 1999, a closed-list system was in place.¹¹ Hence, voters could only affect the election outcome by choosing candidates from different party lists. Since 2003, voters can also influence the selection of candidates by expressing a preference for individual candidates.¹² To overrule the parties' ranking of candidates, a candidate needs to receive individual preference votes equivalent to 8% of their party's votes. Candidates clearing the threshold are moved to the top of the party's list according to the number of preference votes received. In practice, the switch to a *flexible list system* appears to have had negligible effect.¹³

⁸Four regions have since 1999 implemented parliamentary models. We exclude these observations from our analysis.

⁹The only exceptions from this empirical regularity occurred during the 1975 election.

¹⁰National elections do not coincide with local elections, although they too follow a fixed four-year election cycle.

¹¹Candidates were assigned seats according to the ranking assigned them by their respective parties, but with one modification: 1/6 of the seats were reserved for candidates from municipalities with no seats once the other 5/6 of the seats had been assigned. These candidates were effectively given a higher ranking, with the result that most municipalities had at least one representative on the regional council. The reason for this institutional arrangement was to ensure diverse representation. Note that while this electoral rule made the electoral system *malapportioned* (Samuels and Snyder, 2001) in the sense that less populated municipalities came to occupy a disproportional share of seats, it did not affect the degree of proportionality in terms of party representation. In 2003, the seat quota was abolished.

¹²Voters must place one ballot in an envelope, indicating their party vote. They can leave the ballot unmarked, or if they want, they can indicate a preference for a candidate by ticking the box next to that candidate's name on the ballot paper. Voters can cast such preferential votes for as many candidates as they like.

¹³In the 2003 election, 98.8 percent of the elected candidates would have been elected even if the preference votes had been disregarded (Christensen et al., 2004). Similar findings from other countries have led scholars to characterize flexible list systems as little more than closed-list systems in disguise

3 Data

To investigate the effects of local representation on regional distributional politics, we employ a rich data set with information on geographical representation and distributional policies for the period 1976-2011. We first describe the policy outcome data before we proceed to the data on elections and representation.

3.1 Policy outcomes

To study distributive politics we need to quantify resources spent locally by the regional government. Although local governments are financed by the central government, the regional government often implements policies which benefit those living in a certain part of the region. There is no registry containing all such policies and which areas benefit from them. Instead, we use local government account data capturing regional government *funding* of local public investments. A local government is reimbursed whenever it invests in public goods that fall partly or fully within the regional government's remit. The advantage of the funding variable is that it captures investment spending on all sectors and varies considerably over time for each municipality.

Investment funding can be granted for various reasons. One is when the regional government reserves funds for specific purposes - sports facilities for example - and local governments apply for that funding. Another is when regional government delegates responsibility for a specific undertaking, like road maintenance, to the local government.¹⁴ A third is when the local government initiates a project at the local level which involves public buildings or infrastructure for which the regional government is responsible, and subsequently asks the regional authorities to approve the necessary development plans and share the financial burden.

Table 1 presents descriptive statistics in absolute and per capita terms. Due to its

(Crisp et al., 2013).

¹⁴The regional governments do not build or maintain roads themselves and must therefore buy those services from the regional office of the National Public Roads Administration or from the relevant local government.

discretionary nature, the amount of funding received varies considerably between municipalities. While the median local government only receives 0.6 million NOK per election period, the 90th percentile receives 5.7 million and the 99th percentile 27.5 million. By comparison, the median local government invests 83.7 million per election period (1976-1999). Investment funding accounts for 5.4 percent of regional government investments.

Table 1: Descriptive statistics: Investment funding from regional to local governments

	Median	90th percentile	99th percentile	N
Funding (million NOK)	0.6	5.7	27.5	3658
Funding (NOK per capita)	107.0	1023.7	4185.8	3658

Note: The data come from the municipal accounting sheets that are collected by Statistics Norway (SSB) and made available by the Norwegian Social Science Data Services (NSD). The refunds are adjusted for inflation and summed for each four-year electoral period (1976-1979, 1980-1983, ..., 2008-2011).

3.2 Electoral variables

Local, regional, and national elections in Norway are all dominated by seven political parties. Following previous studies, they can be classified as either belonging to the leftwing socialist camp or the rightwing conservative camp (see, for example, Fiva, Folke and Sørensen (2016)). The Socialist Left Party (SV) and Labor Party (DNA) belong to the leftwing bloc. The Liberal Party (V), Centre Party (SP), Christian Democrats (KRF), Conservatives (H), and Progress Party (FRP) belong to the rightwing bloc.

The Labor Party is the dominant leftwing party. When the leftwing bloc holds a majority (which happens in about 26 percent of the cases), the governor is always affiliated to the Labor Party. The rightwing bloc is more fragmented. When the rightwing wins a majority, the governor comes either from the Conservatives, Centre Party, Christian Democrats, or in some cases the Labor Party. Online Appendix Table A.1 provides descriptive statistics by party lists.

4 Analysis of Distributive Politics

As discussed in the introduction, we argue that politicians' *electoral* incentives to cater to their hometowns are weak in at-large PR. This does not, however, imply that politicians do not wish to provide particularistic benefits to local groups. Such *local favoritism* could occur because politicians share interests with the people living there, or because they have a better understanding of local needs.

In this section we investigate whether council representatives from the party of the governor (*aligned representatives*) are able to use their position to obtain more regional public investments for their hometown.¹⁵ How should we proceed to pin down this effect? For ease of exposition, consider a situation with only two parties, *left* and *right*. Municipalities could then be classified into four groups: (i) municipalities without any representatives in the council; (ii) municipalities with leftwing representative(s) only; (iii) municipalities with rightwing representative(s) only; and (iv) municipalities with representatives from both parties. How would a switch from a leftwing to a rightwing governor impact local public investments in these four groups of municipalities? In general, there will be two types of effects.

The first type is *independent* of local representation and can arise if, for example, the two parties have different preferences for the composition of the public sector. If one party has a stronger preference for public investments in general, or for spending on sectors which are more capital intensive, investment funding might increase when this party holds power. This type of effect would have a similar impact on all four groups of municipalities.

The second type of effect *depends on local representation* and is the effect we are interested in. If political alignment is important in our context, then a switch from a leftwing to a rightwing governor will be bad news for municipalities with only leftwing representative(s) (group (ii)) and good news for municipalities with only rightwing representative(s)

¹⁵A hometown here refers to the municipality in which the council member is living at the time of election.

Table 2: Classification of municipalities based on representation in the regional council (N=No representatives, Y=At least one representative)

	Right N	Right Y
Left N	No representatives from Left or Right (14 percent of observations)	Rep(s). from Right but not from Left (26 percent of observations)
Left Y	Rep(s). from Left, but not from Right (28 percent of observations)	Rep(s). from both Left and Right (32 percent of observations)

Note: The table shows the fraction of municipalities with a local representative on the regional council from parties that ever get the governorship. These are the Labor Party (Left) and the Centre Party, Christian Democrats, and Conservatives (Right). Representatives from other parties are not included.

(group (iii)). Since municipalities without representatives are never politically aligned, this type of effect does not apply to group (i), nor to municipalities in group (iv), which are always politically aligned.

With these two types of effects in mind, we start our empirical investigation by classifying municipalities into four groups based on the political *bloc* to which their representative belongs. Since we are interested in political alignment, we only classify representatives belonging to one of the parties that ever wins the governorship. These are the Labor Party in the leftwing bloc and the Centre Party, Christian Democrats, and Conservatives in the rightwing bloc. In the analysis, we only refer to the parties as ‘Left’, ‘Right1’, ‘Right2’ and ‘Right3’. Table 2 shows that the number of observations are quite evenly distributed across group (ii), (iii) and (iv), while only 14 percent of our observations belong to group (i) (no representatives from parties that ever win the governorship).

Which party wins the governorship cannot, in general, be taken as exogenous to policy outcomes. Previously implemented policies, policy promises and unobserved factors correlated with policies may all affect this. For causal inference, we therefore exploit that in close elections it is as good as random which political bloc wins a seat majority, which in turn strongly determines which party gets the governorship and the resulting political alignment. The next section explains how we proceed.

4.1 Close Elections for Causal Inference

Electoral rules govern how votes translate into seats. A consequence is that political representation changes discontinuously at particular thresholds. This makes the regression discontinuity (RD) design ideal for electoral settings; close elections allow researchers to plausibly identify causal effects of political representation (Lee, 2008; Pettersson-Lidbom, 2008).

In majoritarian elections with two parties, it is straightforward to measure the closeness of an election and to implement an RD design (cf. Lee and Lemieux (2010)). In PR systems, it is more complicated, since the number of seats a party wins depends on the vote counts of *all* parties. To deal with this issue we rely on the simulation procedure innovated by Fiva, Folke and Sørensen (2016), a methodology that allows us to quantify how close the rightwing bloc was from losing (winning) the seat majority, *rightwing win margin* in the following.¹⁶

The validity of the RD design hinges on the assumption that parties cannot sort *exactly* around the threshold for a seat majority change. In multi-member PR elections this seems plausible, since parties cannot predict *ex ante* where the seat thresholds are going to be. However, it is reassuring that density plots split by the four groups of municipalities from Table 2 show no evidence of bunching at the seat majority change threshold (Online Appendix Figure A.1). We also find that other predetermined variables are well balanced around the majority change cutoff point (Online Appendix Figure A.2 and A.3).¹⁷

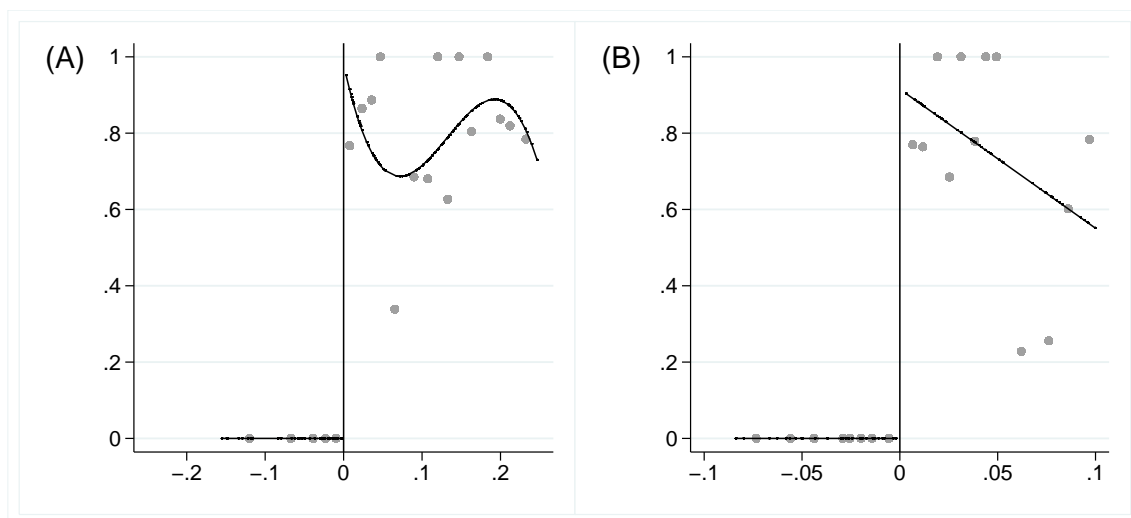
Figure 1 shows that the probability of having a governor from the rightwing bloc increases by 90-95 percentage points at the cutoff point at which the seat majority changes from left to right. The jump in probability is approximately the same whether we use

¹⁶The distance measure we use pin down the change in votes across blocs sufficient to change the seat majority with a 50 percent probability (i.e. in half the simulations). For details, see Fiva, Folke and Sørensen (2016).

¹⁷There is, however, some evidence that close victories of the rightwing bloc occur more frequently earlier in the sample period ($p = 0.10$). In our empirical specification we include election period fixed effects to account for this.

the full bandwidth and a cubic control function (panel A) or zoom in to a plus minus 10 percentage point bandwidth and use a linear control function (panel B). To the left of the cutoff, where the leftwing bloc holds the seat majority, the governor is always from the leftwing bloc. However, to the right of the cutoff, where the rightwing bloc holds the seat majority, the governor is sometimes from the leftwing bloc. That is, there is “imperfect compliance”, which leads us to a fuzzy RD setup (see Lee and Lemieux (2010)).

Figure 1: Probability of a rightwing governor by win margin of the rightwing bloc



Note: The figure shows the relation between the party identity of the governor and the win margin of the rightwing bloc in the regional election. The governor is considered rightwing if s/he is from the Center Party, Conservatives, or Christian Democrats, and leftwing if from the Labor Party. Panel A is based on the full bandwidth and a cubic control function. Panel B is based on a 10 percentage point bandwidth and a linear control function. The 20 bins contain approximately the same number of observations. Separate linear regression lines are estimated below and above the discontinuity using the underlying data ($n=3658$). The figure is produced with the `-rdplot-` module in STATA.

Before we introduce the fuzzy RD design, we present standard RD plots capturing *Intention To Treat* effects of a switch in the bloc holding the governorship. As explained above, we expect the effect of a change in the bloc holding the governorship to be asymmetric for the two intermediate groups of municipalities from Table 2. Figure 2 provides graphical evidence that this is the case. As in Figure 1, we use the full bandwidth and a cubic control function in panel A. In panel B we use a 10 percentage point bandwidth and a linear control function. When crossing the cutoff point where the bloc majority

changes from leftwing to rightwing, per capita investment funding appears to make a downward jump for municipalities with leftwing representatives only (group ii) and an upward jump for municipalities with rightwing representatives only (group iii). For the two other groups (i and iv), the jumps at the cutoff are close to zero, suggesting that the effect of a bloc switch on general investments is small. It seems plausible therefore that the jumps at the cutoff point for the intermediate groups are due to political alignment.

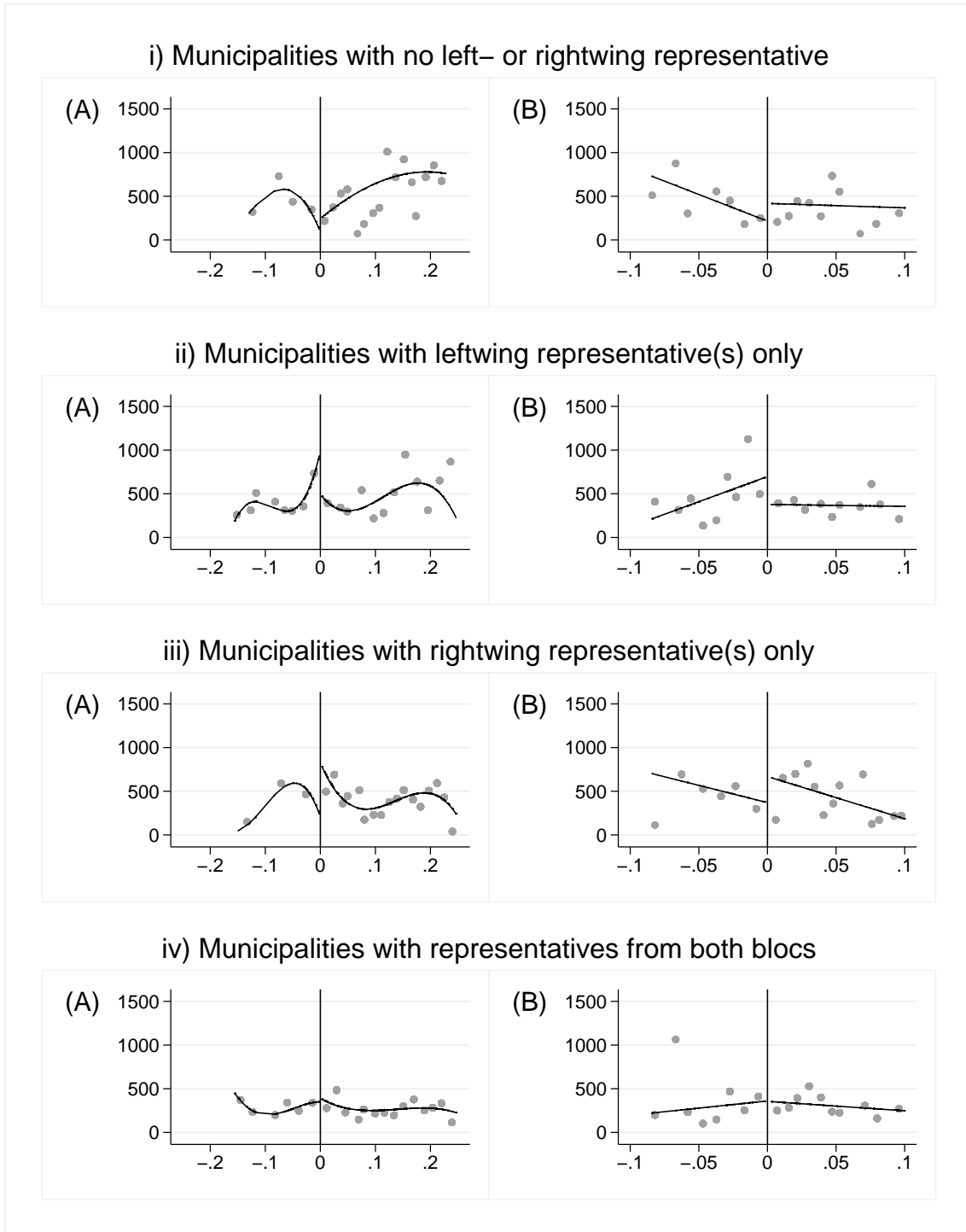
The changes in investment funding to groups (ii) and (iii) when crossing the cutoff are -489 NOK and +616 NOK per capita respectively, using the full bandwidth polynomial specifications (A) of Figure 2 without any additional control variables. We cannot, however, draw firm conclusions about the consequences of political alignment based on this pattern. Only the effect on group (iii) is statistically significant at conventional levels¹⁸, and there could also be an effect of which bloc wins the election on the total amount of funding. We therefore proceed with an RD design that aggregates information across all four groups of municipalities, which results in increased statistical precision.

4.2 Fuzzy Regression Discontinuity Design

As in the previous subsection, we rely on close races for the bloc majority for causal inference. However, we now estimate the effects that a bloc switch has on municipalities with leftwing and rightwing representatives jointly in one specification. We also exploit the fact that the probability of becoming *aligned* depends on the *party identity* of the municipalities' representative(s). For example, when the bloc majority switches from left to right, a municipality with representatives from each of the three rightwing parties is more likely to become aligned, than a municipality with only representative(s) from one of the three parties. Formally, we instrument for political alignment using interactions between regional government bloc majority and the party identity of the representative(s) from each the municipality. Since the probability of receiving treatment changes discon-

¹⁸The p -value of the effect on municipalities with a leftwing representative only is 0.41, using the wild bootstrap procedure of Cameron, Gelbach and Miller (2008) to account for within-region correlation. The p -value of the effect on municipalities with a rightwing representative only is 0.03.

Figure 2: Funding to local governments by rightwing win margin in the regional election split by local representation on the regional council



Note: The figure shows the relation between per capita investment funding by the regional government (in NOK per election period) and the win margin of the rightwing bloc in the regional election. The figure is split by four categories describing how a municipality is represented on the regional council. Panel A is based on the full bandwidth and a cubic control function. Panel B is based on a 10 percentage point bandwidth and a linear control function. The 20 bins in each plot contain approximately the same number of observations. Separate regression lines are estimated to the left and right of the discontinuity using the underlying data ($n=3658$). The figure is produced with the `-rdplot-` module in STATA.

tinuously at the cutoff for a seat majority change, this is a fuzzy regression discontinuity design (Lee and Lemieux, 2010).

The first stage is given by:

$$\begin{aligned} Align_{rit} = & \lambda_{ri} + \iota_t + \mu_0 MajLeft_{rt} + \sum_P \mu_P rep_{rit}^P + \sum_P \alpha_P MajLeft_{rt} \cdot rep_{rit}^P \\ & + \psi_0(WinMargin_{rt}) + \sum_P rep_{rit}^P \cdot \psi_P(WinMargin_{rt}) + \varepsilon_{rit}, \quad (1) \end{aligned}$$

where $Align_{rit}$ is an indicator variable capturing whether municipality i has any representative on regional council r of the same party as the governor at election period t . $MajLeft_{rt}$ is an indicator variable describing whether or not the left has a seat majority on regional council r at election period t . rep_{rit}^P , $P \in \{Left, Right1, Right2, Right3\}$ are indicator variables describing whether the municipality has any representative on the regional council belonging to each of these parties. The last interaction terms in the first line of this equation are the excluded instruments. The α^P 's capture changes in the probability of the municipality having any representatives aligned with the governor as we cross the seat majority threshold. In our baseline analysis we control for a low order polynomial of the win margin on each side of the discontinuity, $\psi(WinMargin_{rt})$. The polynomial is interacted with rep_{rit}^P for each party P . The equation also includes municipality fixed effects, γ_{ri} , and election period fixed effects, ι_t .

Table 3 provides the first stage estimates. As expected, we find that the probability of alignment with the governor changes dramatically as we cross the majority change threshold. For municipalities with a representative from the Labor Party on the regional council, the increase is almost 100 percentage points. For municipalities with representatives from the rightwing parties, the effect, naturally, is smaller, goes in the opposite direction, and also differs among the three parties. The first stage is similar across all specifications (second or third order polynomial, with or without municipality fixed effects). A graphical representation can be seen in the Online Appendix Figure A.4.

Table 3: First Stage

	(1)	(2)	(3)	(4)
Left Majority \times Rep from Left	0.84*** (0.12)	0.79*** (0.11)	1.04*** (0.16)	0.95*** (0.14)
Left Majority \times Rep from Right1	-0.46** (0.20)	-0.49** (0.18)	-0.48* (0.26)	-0.53** (0.25)
Left Majority \times Rep from Right2	-0.17 (0.17)	-0.15 (0.16)	-0.14 (0.23)	-0.09 (0.18)
Left Majority \times Rep from Right3	-0.31* (0.16)	-0.37** (0.17)	-0.47* (0.24)	-0.55** (0.24)
Left Majority	-0.03 (0.03)	0.02 (0.05)	-0.09* (0.05)	-0.04 (0.06)
Rep. from Left	0.16 (0.12)	0.20* (0.11)	-0.02 (0.15)	0.02 (0.14)
Rep. from Right1	0.46** (0.20)	0.39** (0.17)	0.47* (0.25)	0.40* (0.22)
Rep. from Right2	0.17 (0.18)	0.23 (0.17)	0.14 (0.23)	0.21 (0.22)
Rep. from Right3	0.31* (0.17)	0.34* (0.17)	0.48* (0.24)	0.50** (0.24)
F-stat., excluded instr.	13.68	16.37	13.07	16.92
Observations	3658	3658	3658	3658
Mean of outcome var.	0.49	0.49	0.49	0.49
Municipality fixed effects	No	Yes	No	Yes
Time fixed effects	Yes	Yes	Yes	Yes
Polynomial order	2	2	3	3

Note: The dependent variable is an indicator variable capturing whether the municipality has any representative on the regional council of the same party as the governor ($Align_{it}$). Standard errors clustered at the regional level in parentheses.

** $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.*

The second stage is given by:

$$Y_{rit} = \gamma_{ri} + \nu_t + \delta \hat{Align}_{rit} + \beta_0 MajLeft_{rt} + \sum_P \beta_P rep_{rit}^P + \\ + \phi_0(WinMargin_{rt}) + \sum_P rep_{rit}^P \cdot \phi_P(WinMargin_{rt}) + \xi_{rit}, \quad (2)$$

where Y_{rit} is regional government investments in municipality i in region r at time t . Two Stage Least Squares (2SLS) estimates are provided in columns 1-4 of Table 4. The effect of having an aligned representative on investment funding is positive and stable across specifications with and without municipality fixed effects and a control function of second or third order. The effect is statistically significant at the 10 percent level or lower based on a wild bootstrap p -value (Cameron, Gelbach and Miller, 2008).¹⁹ The exception is the most demanding specification with a third-order polynomial and municipality fixed effects (column 4), where the p -value is 0.12. The point estimate of about NOK 600 (USD 90), corresponds to about 0.56 of a standard deviation.²⁰

As a comparison to our 2SLS estimates, we also show Ordinary Least Squares (OLS) estimates where we do *not* rely on close elections for inference. In this specification (column 5 of Table 4) we do not instrument for $Align_{rit}$, but do control for $\sum_P rep_{rit}^P$, as well as dummies for the party holding the governorship. The estimated effect of $Align_{rit}$ in this model is about 1/8 the size of the effect in the RD analysis and marginally statistically significant according to the wild bootstrap p -value.

The OLS specification may be biased for two broad reasons. First, political alignment may be correlated with other local government characteristics that influence investment decisions (an omitted variable problem). Second, a local government's probability of being aligned may depend on (expected) investment funding (a reverse causality problem). A negative bias could occur if, for example, political elites residing in local governments

¹⁹In all specifications we report standard errors clustered at the regional level. However, with only 18 clusters inference may not be reliable. We therefore follow Cameron, Gelbach and Miller (2008) and apply (wild) bootstrap resampling methods.

²⁰Since the parameter estimates for having representatives for Left, Right1, Right2 and Right3 are not pinned down by the RD design, we do not give them causal interpretations.

that expect little investment funding are making a bigger effort to get a local candidate on the regional council aligned with the mayor.

Table 4: Second Stage: The Effect of Political Alignment on Funding per Capita

	(1) 2SLS	(2) 2SLS	(3) 2SLS	(4) 2SLS	(5) OLS
Aligned representative	582.20*** (209.95)	639.23** (251.06)	626.87** (276.73)	618.48** (308.21)	76.64 (46.10)
Left Majority	-105.03 (82.86)	-181.48 (111.00)	-176.62 (140.38)	-287.51 (179.26)	
Rep. from Left	-199.24* (112.03)	-181.34 (133.39)	-139.42 (121.47)	-103.97 (142.81)	4.07 (41.84)
Rep. from Right1	-249.61 (192.92)	-62.12 (154.59)	-350.55 (230.41)	-132.84 (181.24)	12.58 (26.18)
Rep. from Right2	-136.08* (73.99)	-69.86 (155.71)	-153.59 (119.91)	-8.93 (180.02)	-20.78 (32.43)
Rep. from Right3	-27.69 (141.67)	21.50 (142.85)	-108.77 (202.75)	-84.24 (166.64)	-11.44 (53.06)
<i>p</i> -value (Aligned rep.)	0.02	0.05	0.07	0.12	0.09
Observations	3658	3658	3658	3658	3658
Mean of outcome var.	409.06	409.06	409.06	409.06	409.06
Municipality fixed effects	No	Yes	No	Yes	Yes
Time fixed effects	Yes	Yes	Yes	Yes	Yes
Governor party dummies	No	No	No	No	Yes
Polynomial order	2	2	3	3	-

*Note: The dependent variable is per capita funding (in NOK per election period). The *p*-value of the effect of having an aligned representative is based on the wild bootstrap approach by Cameron, Gelbach and Miller (2008). Standard errors and corresponding significance stars are based on a cluster-robust covariance matrix, with clustering on the regional level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.*

4.3 Extensions and Sensitivity Checks

Given the highly-skewed nature of the per capita funding variable, we also provide results after replacing our main dependent variable with dummies indicating whether the local government receives at least NOK 100 or NOK 1000 per capita, respectively. These results are reported in Online Appendix Table A.2. Using the NOK 1000 cutoff, the effect is positive and statistically significant. With the NOK 100 cutoff, it is smaller and

statistically insignificant. It appears that large investment projects drive our baseline results.

All observations were included in the analysis presented above regardless of the win margin. Controlling for a smooth function of the win margin ensures that the inference is drawn at the threshold where the majority bloc changes. In Online Appendix B we show that our main results are insensitive to the exclusion of observations far from the threshold where the majority bloc changes.

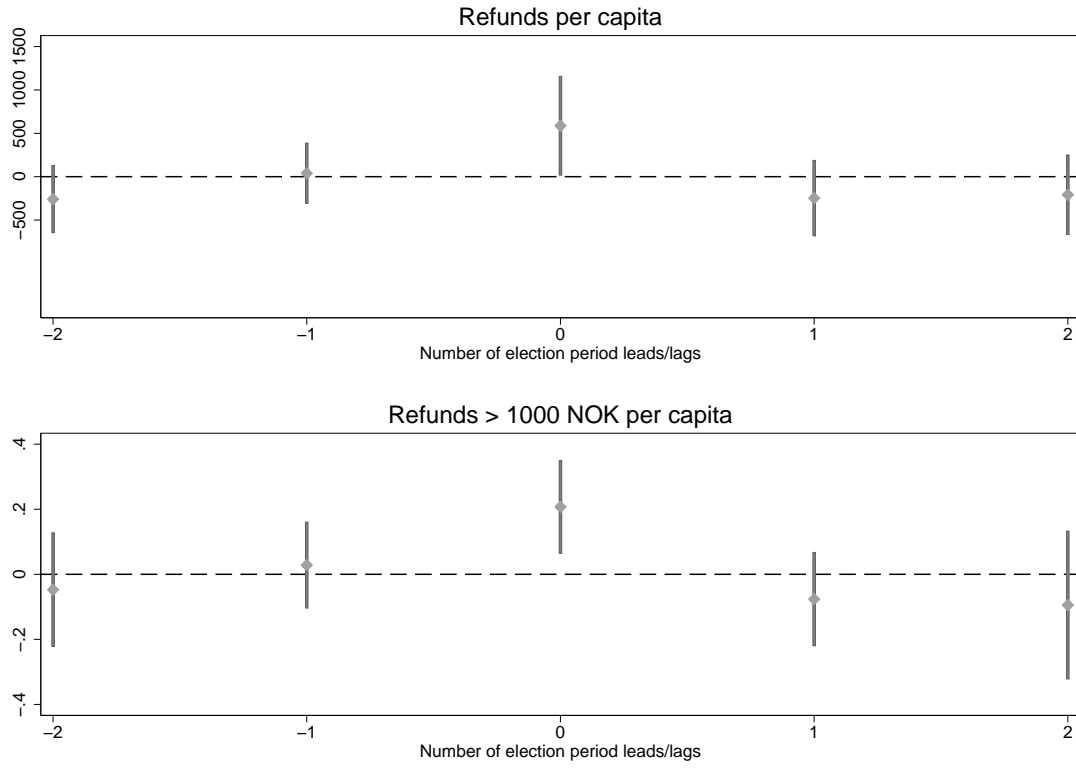
To empirically assess the validity of our identification strategy, we conduct a falsification test. We re-estimate equation (2) where Y_{it} is replaced with Y_{it+k} for $k = -2, -1, 0, 1, 2$ and contrast placebo estimates for $\delta^{j,k}$ for $k = -2, -1, 1, 2$ to the actual estimate $\delta^{j,k}$ when $k = 0$. In Figure 3 we report the estimated coefficients of these regressions and 95 percent confidence intervals. If the placebo analysis produces results similar to our baseline analysis it would cast doubt on the research design used in this paper. We do not find this to be the case. For $k = -2, -1$, the point estimates are quite small and not statistically different from zero. This is also the case for the subsequent periods ($k = 1, 2$), indicating that there are no delayed effects.²¹

While investment funding constitutes one type of public spending with local benefits, it does not capture all regional government policies which have distributional implications. In Online Appendix C, we show the effect of having an aligned representative on the amount of finished road construction projects in the municipality, for different time lags. There is a positive and statistically significant effect on road constructions which is strongest for constructions completed four to seven years after the current election period. Since these are mainly large-scale projects, the time lag in the effect seems reasonable. However, given that major regional road building projects are somewhat rare, these results should be interpreted with some caution.

In this paper we focus on political alignment *within* the same level of government.

²¹In Online Appendix D, we show the results when estimating the model using funding in each year of the election period. The results are similar to our baseline analyses, but lack of statistical precision prohibits firm conclusions about within-period timing of the effect.

Figure 3: Falsification Test



Note: The dependent variable in the upper panel is per capita funding (in NOK per election period). The dependent variable in the lower panel is an indicator variable that is turned on if per capita funding (in NOK per election period) is larger than 1000. Reported are estimates for $\delta^{i,k}$ from equation (2) where Y_{it} is replaced with Y_{it+k} for $k = -2, -1, 0, 1, 2$. Municipality fixed effects not included. Bars represent 95 percent confidence intervals. Standard errors are clustered by region.

A related strand of literature emphasizes political alignment *across* government tiers (see footnote 2). One might worry that alignment within and alignment across tiers are positively correlated and that our baseline estimates therefore pick up the effect of alignment across tiers. We find no evidence that this is the case, however. Adding a control variable for political alignment between the local mayor and the regional governor leaves our baseline estimates basically unaltered (cf. Online Appendix Table A.3).

5 Mechanisms

In light of the conventional wisdom about party-centered PR systems, where “voters vote on the basis of broad policy options rather than on the basis of promised particularistic benefits” (Carey and Shugart, 1995, p. 433), our main results are striking: it appears that even in an at-large PR context, politicians, once elected, tend to cater to their hometowns. In this section we explore the likely mechanisms behind the hometown bias.

First, we investigate whether voter behavior is consistent with our main findings. If the party in power directs more pork to the hometowns of its representatives, voters should take candidates’ hometowns into account when casting their votes. Key (1949) coined the term “friends-and-neighbors” voting to describe the phenomenon of voters disproportionately supporting candidates with some local attachment. Do voters also exhibit a hometown bias in our at-large PR setting? As we will see shortly, the answer is yes. A plausible interpretation of these results is that voters use hometown status as a cue to politicians’ understanding of local needs and likely behavior once elected (Shugart, Valdini and Suominen, 2005). A lingering question is then: *Why* do politicians cater to their hometown? We address this question in the following subsection.

5.1 Friends-and-Neighbors Voting

To investigate friends-and-neighbors voting in our setting, we collect data on first-placed candidates’ hometowns (i.e., gubernatorial candidates’ hometowns) and relate this to

voting behavior.²² To control for unobserved time-varying changes in party support, we exploit the coincidence in time and space of local and regional government elections, as in Andersen, Fiva and Natvik (2014). We estimate the following equation:

$$VoteRegional_{it}^y = \gamma_t + \nu_i + \sum_P \mu_P No1_{it}^P + \lambda VoteLocal_{it}^y + \epsilon_{it}, \quad (3)$$

where $VoteRegional_{it}^y$ is the fraction of the electorate casting a vote for y , $y \in \{Left, Right1, Right2, Right3, Other, Abstain\}$, at the regional government election in municipality i at time t . $No1_{it}^P$, $P \in \{Left, Right1, Right2, Right3\}$ is an indicator variable representing whether the first-placed candidate at the regional election from party P at time t is from municipality i .²³ $VoteLocal_{it}^y$ is the fraction of the electorate casting a vote for y , $y \in \{Left, Right1, Right2, Right3, Other, Abstain\}$, at the local government election in municipality i at time t .

μ_P captures the causal effect of having a first-placed candidate on $VoteRegional_{it}^y$ as long as $Cov(No1_{it}^P, \epsilon_{i,c}) = 0$. The identifying assumption is that after conditioning on support in the local election, there are no other time-varying factors that impact support in the regional election and are correlated with the probability that the top candidate is from the municipality.

There is a strong degree of overlap in the voting patterns across the local and regional government elections (cf. Online Appendix Figure E.1), indicating that $VoteLocal_{it}^y$ is a highly relevant control variable which allows us to net out, for example, party y 's tendency to choose first-placed candidates from a party stronghold.²⁴ A potential problem, however, is that simultaneously held elections may introduce interaction or contamination effects (Kern and Hainmueller, 2006; Bafumi, Erikson and Wlezien, 2010). For example, having a first-placed local candidate at the regional election from *Left*, may lead some

²²Because of data availability, we do not test for similar effects for lower ranked candidates.

²³Information on name, year of birth, and hometown (municipality) is given on all candidates listed on the ballot paper. Some parties also list the candidate's occupation.

²⁴Under the nationwide closed-list PR systems of Israel and the Netherlands, major parties tend to nominate candidates from the regions where they are strong, but not where they are very dominant (Latner and McGann, 2005).

voters to vote for *Left* at the local level as well. Such lack of independence across elections is likely to bias our tests against finding an effect of having a first-placed candidate (Cox, Rosenbluth and Thies, 2000; Fiva and Folke, 2016).

The results reported in Table 5 indicate that voters, on average, exhibit a considerable hometown bias. Having a local gubernatorial candidate increases the fraction of the electorate voting for the respective party by about 1.4 to 3.2 percentage points (cf. the diagonal elements in Table 5). These effects are statistically significant at the 1 percent level for all four parties.

The increase in electoral support for a party with a local candidate can be split into two components. First, through shifts in the distribution of votes for the citizens that would turn out to vote anyway. Second, through the mobilization of supporters who otherwise would abstain (Rice and Macht, 1987). In our setting, both mechanisms appear to matter. The reduction in abstainers (cf. column 6 in Table 5), however, only amounts to a small fraction of the total effect for all parties.²⁵ Fiva and Smith (2016) document a similar hometown bias in Norway’s historic two-round parliamentary elections.

Our results are also similar to those documented in U.S. gubernatorial races. Meredith (2013*a,b*) finds that when a gubernatorial candidate was born or resides in a county, their vote share increases by about 3 percentage points. Like Lewis-Beck and Rice (1983) and Rice and Macht (1987), he finds that less populated areas demonstrate more “friends-and-neighbors” voting. We also find that small municipalities drive our results. In municipalities of below median population size the hometown bias is about twice as large as in the municipalities of above median population size (Online Appendix Tables E.1 and E.2).

The main take-away point from Table 5 is that citizens tend to vote more often for parties whose gubernatorial candidate is from their own hometown, consistent with expectations of particularistic benefits. In the next subsection we explore the link between local politicians and local voters from the politicians’ perspective.

²⁵For *Right2* we cannot reject the possibility that the entire effect is due to voters who generally support opposing parties convert to support the candidate with local attachments.

Table 5: Electoral Support and First-placed Candidates' Hometown

	(1) Left	(2) Right1	(3) Right2	(4) Right3	(5) Other	(6) Abstain
Local top cand., Left	0.020*** (0.005)	-0.001 (0.002)	-0.003* (0.002)	-0.006** (0.003)	-0.002 (0.004)	-0.005*** (0.001)
Local top cand., Right1	-0.007** (0.003)	0.032*** (0.005)	-0.006*** (0.001)	-0.004* (0.002)	-0.008*** (0.002)	-0.007*** (0.002)
Local top cand., Right2	-0.001 (0.001)	-0.006*** (0.002)	0.014*** (0.003)	-0.004* (0.002)	-0.002 (0.003)	-0.001 (0.001)
Local top cand., Right3	-0.005*** (0.001)	-0.003** (0.002)	-0.003* (0.002)	0.023*** (0.006)	-0.006 (0.003)	-0.004*** (0.001)
VoteLocal	0.584*** (0.037)	0.329*** (0.026)	0.348*** (0.034)	0.393*** (0.040)	0.162*** (0.023)	0.882*** (0.022)
R-squared	0.79	0.52	0.61	0.70	0.50	0.94
Observations	3611	3611	3611	3611	3611	3611
Mean of outcome var.	0.21	0.11	0.07	0.11	0.13	0.36
Municipality fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Sample	All	All	All	All	All	All

Note: For specifications (1) to (5), the dependent variable is the electoral support of the relevant party given in the Table heading. For specification (6), the dependent variable is the fraction of abstainers. Standard errors clustered at the regional level in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

5.2 Why Do Politicians Favor Hometowns?

Even though hometown voters are not particularly important for securing re-election, incumbent politicians may still want to please hometown voters, not least if they are planning a career in local politics (Carozzi and Repetto, 2016). Alternatively, members of the regional council might care about their own hometown because they were recruited *from* local politics. To explore these mechanisms we use individual level data covering all candidates running for regional elections in the 2001-2015 period combined with corresponding data for local and national elections for the same candidates.²⁶ In addition, we

²⁶We do not have candidate level data from earlier elections. Candidates are matched by first and last name. Matching regional and local candidate names are also required to have the same hometown. Election lists for regional and national elections 2003-2015 and local elections 2007-2015 are publicly available. Data on local candidates and their election outcomes for 2003 and 2007, used in the studies by Christensen et al. (2004) and Christensen et al. (2008), were provided by the Rokkan Centre. Data on elected local candidates for 2011 and 2015 were provided by the Ministry of Local Government and Modernisation. We also include information on regional council members in 1999 (from Statistics Norway

extend the baseline analysis of local public investments by splitting on council member career stage and municipality size.

5.2.1 Future Political Careers

Figure 4 plot the probability of different political career outcomes before, during, and after the current regional election against the *rank distance* at time t . The career outcomes are: elected to the regional council (top); top candidate in the local election (middle); and candidate for the national parliament (bottom).²⁷

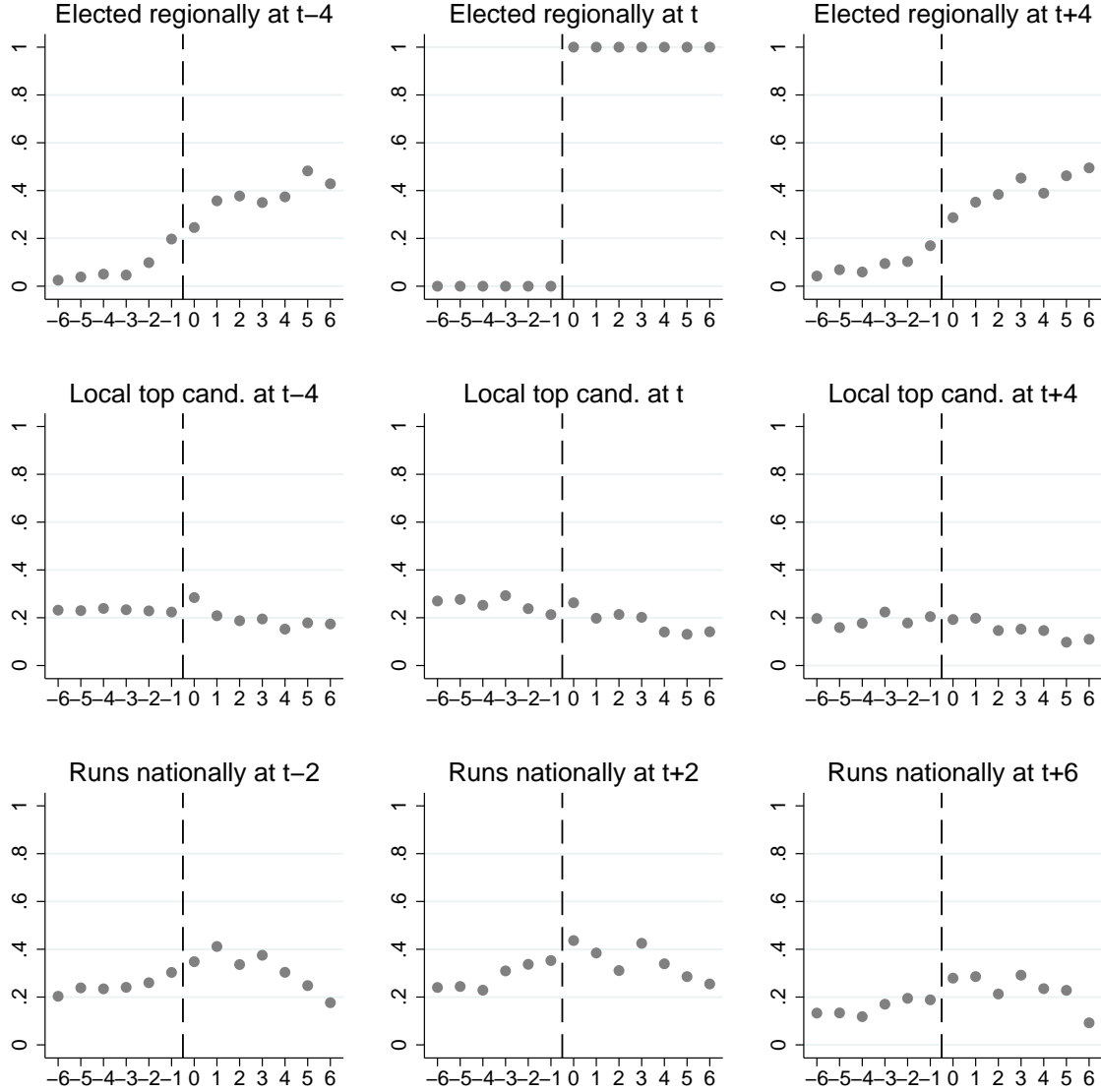
The top right panel of Figure 4 shows that many regional council members elected at time t continue with a career at this level. It seems that ‘marginal winners’ (position 0) have an electoral advantage in the next regional election over ‘marginal losers’ (position -1). The jump at the cutoff is, however, not much larger than the bin-to-bin variation away from the cutoff so we only interpret this as suggestive evidence of an incumbency advantage.

We find no evidence that regional council members are using their time in office to prepare the ground for a *local* political career. Candidates who just get elected to the regional council are *not* more likely to become top local candidates at $t + 4$ in comparison to candidates who just miss out on a seat. And it is more common for elected regional councilors to have been top local candidates *before* election to the regional council than afterwards. In contrast, it seems that regional councilors use some of their time in office to jumpstart a *national* political career (bottom panel of Figure 4). While 19 percent of ‘marginal losers’ run for national office at time $t + 6$, 28 percent of ‘marginal winners’ do the same. The difference is statistically significant at the 5 percent level (Online Appendix Table F.1).

report NOS C 622) to identify incumbents in 2003.

²⁷ *Rank distance* is defined as the difference between a candidate’s rank position on the party list and the number of elected candidates from that party list. Candidates winning a seat on the regional council have non-negative values on *rank distance*. We ignore the few candidates that change ranking position after the election due to preference votes. According to Christensen et al. (2004), four candidates from the parties in our sample won a seat as a result of preferential votes cast in 2003, and four lost their seat. We do not have this information for all elections. Online Appendix Figure F.1 shows the density of observations by rank distance from marginally elected.

Figure 4: Electoral outcomes for regional council candidates by rank distance at time t



Note: Sample restricted to candidates running in the 2003, 2007, and 2011 regional elections for party lists winning at least one seat. Candidates whose hometown status is unknown are not included. Along the horizontal axes we plot the difference between a candidate's rank position on the party list and the number of elected candidates from that party list. We only show outcomes for candidates ranked between one and six positions from the last candidate elected ($N=3,572$). The dashed vertical line indicates the transition from candidates losing to candidates winning a seat. Personal votes have little impact on regional election outcomes and are not taken into account. Regional and local elections are held every fourth year. National elections are also held every fourth year, but at a two year interval from the local elections.

The plots in Figure 4 are similar in spirit to the RD design suggested by Lundqvist (2013). However, in our setting, the jumps at the cutoff do not necessarily capture a causal effect of winning office since parties may have a clear idea about the number of seats they are likely to get and might assemble the lists accordingly. Stronger candidates may, for example, be more likely to be ‘marginal winners’ than ‘marginal losers.’ We do not, however, find evidence of ‘marginal winners’ being systematically different from ‘marginal losers’ on candidate background characteristics such as age, gender, and party affiliation (see, Online Appendix Table F.1 and Online Appendix Figure F.2).

5.2.2 Political Experience, Background, and Information

The preceding analysis provides no support for the conjecture that regional council members spend their time in office preparing for a local political career. In this sense, they do not appear to be *forward-looking*. An alternative explanation for the hometown bias is that regional council members are *backward-looking*: By often having a background in local politics, they may be better informed about possible local projects. The typical career track of a politician seems to go from local via regional to national politics. As seen in Figure 4, a substantial share of regional council members are top candidates in the local election in the previous election period. An even larger share, about half, have previously held a seat in the local council, and surprisingly many serve as local and regional council members *at the same time* (see Online Appendix Table F.2).²⁸

If service as a regional council member weakens politicians’ local ties over time, newly-elected members will have stronger local ties than longer-serving incumbents. To investigate whether this affects the tendency of council members to direct funding toward their hometowns, we repeat the analysis in section 4, splitting the sample based on municipality-level data on the number of incumbent council members.²⁹ The estimates

²⁸Online Appendix Table F.2 also provides descriptive statistics separately for incumbents and newly-elected regional council members.

²⁹It would be interesting to split the sample based on the local political experience of regional council members. Data availability precludes such an analysis. Candidate-level data are only available for the 2000s.

reported in Table 6 suggest that council members' experience from local politics might drive the hometown bias. Our baseline results are driven by municipalities with only newly-elected regional council members (column (1) and (2)). The estimated effects of alignment on funding for municipalities with only incumbents (column (3) and (4)) are closer to zero and not statistically significant.

In columns 5-8 of Table 6 we show separate results for municipalities with above and below median population sizes (measured in 1995), using our baseline specifications. For the sub-sample of large municipalities, the effect of being politically aligned is small and statistically insignificant. For the sub-sample of small municipalities, the point estimates are somewhat larger than for the full sample and statistically significant.³⁰ Different types of mechanisms may contribute to this pattern. We believe the most plausible explanation is that politicians from small municipalities are likely to be better informed of local needs. This is consistent with the findings of the analysis of friends-and-neighbors voting where the hometown bias were found to be stronger in small municipalities.³¹

5.3 Summary

In closed-list PR systems, voters do not have the opportunity to enhance the election prospects of one or another candidate on a list. Still, they might be more inclined to vote for a party given knowledge that a local candidate is on the list and has a rank that makes election plausible (Nemoto and Shugart, 2013). We document that voters do indeed use information about candidates' hometown status when deciding what party to support. Candidates' place of residence, which features prominently on the ballot,

³⁰We cannot, however, reject that the effects of being politically aligned are of the same size in the small and large municipalities.

³¹The stronger hometown bias in small municipalities might also be explained by models of distributive politics. In the model of Weingast, Shepsle and Johnsen (1981), the incentives of each representative to exploit the common pool under universalist decision-making is stronger if districts are smaller. In the non-cooperative bargaining setting of Baron and Ferejohn (1989) model, districts which are smaller but equally represented are more likely to be part of the majority which receives local public goods (Persson and Tabellini, 2000, p. 165). While these models involve a tradeoff between local public spending and private consumption, a similar logic applies when a fixed budget is divided among particularistic and collective goods (Volden and Wiseman, 2007). However, none of these models capture the role of parties in coalition-building and decisions.

signals familiarity with the area and local interests. Voters may therefore expect to receive distributional benefits of local representation and vote accordingly.³²

Using data on political careers, we find no evidence that representatives use their time in regional politics to prepare the ground for a *future* local political career. Rather, our results suggest that regional council members' typical *background* from local politics contribute to pork barreling. A plausible explanation is that representatives with recent experience from local politics are more informed about local political issues.

6 Conclusion

In this paper, we show that candidates' local ties matter even in electoral systems based on at-large proportional representation. Regional politicians tend to direct public funding toward their hometown if they represent the party that is in power. We also find that parties receive more votes in the hometown of their top candidate, possibly because local voters expect candidates to promote their interests.

Our RD design provides exogenous variation in the party identity of the governor. This allows us to show that representatives *aligned* with the governor obtain more investments in their hometowns. This does not rule out that there could also be an effect of winning a council seat *in itself*. Knight (2008) finds both a general effect of U. S. Senate representation on funding and an effect of having more representatives from the majority party.

We consider our study to be an important addition to the distributive politics literature: The electoral incentives for individual politicians are not the sole factor driving 'pork barrel politics.' Politicians' social ties or group identities are also likely to play a role. This is in line with previous studies showing that other characteristics of politicians, e.g., gender (Chattopadhyay and Duflo, 2004), and ethnicity (Pande, 2003), matter for

³²Voters' hometown bias might also have a less instrumental explanation. Lewis-Beck and Rice (1983) argue, for example, that voters may experience psychological satisfaction from voting for someone who shares a common trait with them.

policy. Our findings are also in line with recent studies documenting the importance of local ties in non-electoral settings (Hodler and Raschky (2014), Do, Nguyen and Tran (2016)). It seems like geography is important in more political settings than previously suggested in the literature.

Table 6: Second Stage: Split on the number of incumbents and on population size

	No incumbents		Only incumbents		Small population		Large population	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Continuous	Dummy	Continuous	Dummy	Continuous	Dummy	Continuous	Dummy
Aligned representative	498.83*** (187.40)	0.24*** (0.08)	233.53 (533.19)	-0.06 (0.06)	789.26* (422.52)	0.28*** (0.09)	16.75 (125.21)	0.10 (0.09)
Left Majority	-638.27*** (242.91)	-0.24*** (0.07)	471.40 (475.88)	0.01 (0.06)	-542.11** (221.79)	-0.27*** (0.06)	5.42 (128.80)	-0.08 (0.06)
Rep. from Left	-256.02 (266.26)	-0.01 (0.07)	405.00* (215.74)	0.16*** (0.06)	140.15 (201.01)	-0.03 (0.06)	-314.80*** (92.37)	-0.18*** (0.07)
Rep. from Right1	-354.38 (371.51)	-0.12 (0.14)	213.63 (752.72)	0.24 (0.15)	-320.42 (264.32)	-0.06 (0.14)	98.31 (80.58)	0.00 (0.03)
Rep. from Right2	-479.60* (248.58)	-0.29*** (0.11)	-380.90 (234.97)	-0.09 (0.06)	-123.76 (305.00)	-0.03 (0.08)	80.50 (125.16)	0.02 (0.06)
Rep. from Right3	327.32 (253.37)	-0.04 (0.09)	-155.36 (486.16)	0.02 (0.05)	49.44 (379.82)	-0.12 (0.10)	19.11 (64.93)	-0.01 (0.05)
p-value (Aligned rep.)	0.10	0.08	0.86	0.36	0.11	0.01	0.90	0.21
Observations	1079	1079	700	700	1751	1751	1808	1808
Mean of outcome var.	378.73	0.10	346.64	0.08	560.01	0.14	275.51	0.07
Municipality fixed effects	No	No	No	No	Yes	Yes	Yes	Yes
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Polynomial order	3	3	3	3	3	3	3	3

Note: The data cover elections conducted in the years 1979 to 2003. The dependent variables are per capita refunds (in NOK per election period) and a dummy variable indicating whether the local government received refunds of more than 1000 NOK per capita. In columns 1-4, the sample is split by the share of incumbents among the council member(s) from the municipality. Incumbents include deputy council members who became council members in the previous term. Municipalities with no council members are not included. In columns 5-8, the sample is split by municipal population in 1995. The p-value of the effect of having an aligned representative is based on the wild bootstrap approach by Cameron, Gelbach, and Miller (2008). Standard errors and corresponding significance stars are based on a cluster-robust covariance matrix, with clustering at the regional level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

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